USCMS Engineer Status Report for July 2004

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1 Work Performed This Month

*** Watch Projects

Creating document on-the-fly with Javascript is replaced by generating many small documents in advance. The web pages layout is reorganized to show the information for several domains (e.g. CERN, FNAL, LCG, UAF local,..), each on a separate page. Earlier only FNAL and CERN were shown on the same page. Testing new version in various situations, investigate the "duplicated entries" bug. Work on addition of the platform info for the releases in the projects watch. Formulated basic guidelines for next step: new pages layout and design.

*** Local CMS software installations at Fermilab

Installed a bunch of new software releases, to provide new features and important bug fixes. Run some tests to insure the installation works.

COBRA COBRA_7_8_5

ORCA ORCA_8_2_0

OSCAR OSCAR_3_2_5

Geometry Geometry_1_9_0

IGUANA IGUANA_5_0_1

IGUANACMS IGUANACMS_1_9_0

The users reported various problems on the UAF after shutdown and upgrade some UAF nodes were misconfigured. Debugging the problems and working with sysadmins on fixing them (CERN kdc was missing on all nodes: now it is added to the rocks; links to libshift were missing on some nodes; conflict between UPS and CMS python, missing compilers...). In total several days were spent on investigating and debugging. Maybe we should think of better organization: to have a reference node, where the modifications can

be tried first. Also better communication between the sysadmins and the software support people would be helpful. Set a meeting with Hans and Enrico to discuss test procedures (what needs to be tested, when, how and by whom).

Work with Enrico on a test suite based on Hans's example of particle gun. Such suite would allow to check a chain of software applications, and could be run automatically by non-expert e.g. to ensure that the software functionality is not broken after the system upgrade, update, or other modifications.

*** Maintaining AFS space and backups

Discussed with John Bakken and Ray Pasetes, and requested additional AFS space for the new releases. Currently facilities could not provide backup for all afs volumes we would like to have. I am using my own script to backup releases from the volumes not covered by the afs backup system. I let John to review my backup script: he said it's fine.

*** Software distribution DAR development and support.

Presented new DAR features on CMS Production meeting.

Discussed DAR requirements for the MC Processing Services. What is needed in order to enable incremental DAR distributions for the users to run private analysis jobs against public installations.

We have had several production use-cases when we needed to chain applications based on different versions. For example, to get an advantage of advanced features available in new POOL release, or use new COBRA functionality. This mix-match possibility was not foreseen in the job managing tools, or in the RefDB interface. We discussed this with Tony et Al (the principal possibility was already tested during the DC04. The proposed solution was to introduce additional step in production tools. Provided DARballs for this preparation step.

Looking for space for DAR distribution pool.

*** LPC

The LPC software development support group discussions converged, and the document has been frozen. A number of related tasks have been attached to the document, and are being worked on.

Prepared and presented a talk "Software support for LPC" (see below), with an assessment on what needs to be done to respond to the Software Development Environment report.

Investigating the possibility to build debug libraries: some users at FNAL would like to have this service, while at CERN this feature is not supported, and scram debug build is currently broken. Looking into LCG solution for

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the application area projects, they use different architecture name for debug builds.

*** Misc

Adapted CMS setup scripts to set access to LPC and USCMS repositories. Enables pserver access in USSCMS repository.

Many new modules in USCMS repository; MCPS, MajorTom: Mop Applet for JOb Running, Tracing and Operations Management. Set up CVS access for CMS database projects developers at FNAL. Inquire through helpdesk how to enable e-mail notifications about CVS commits.

Helped Yuyi Guo to get started with the local development of POOL-based applications at Fermilab. It was not that straightforward, because POOL is the LCG software package, and we did not support LCG development environment at FNAL before.

Work on helpdesk ticket to resolve users' problems with setting up user's system for running IGUANA and IGUANACMS.

Published ACAT03 DAR paper as Fermilab pre-print.

Provided collection of "SCRAM hints" for the CMS software users to overcome build problems due to scram inability to handle long environment.

*** DPE

Tested clarens "pacmanized" distribution prepared by Bockjoo. and included into DPE2_6_0 release (see release notes). Clarens-dpe can be installed independently of DPE client, master, VDT and other components. It includes both Clarens server and Clarens client software (version 0.6.4), and installs all required pre-requisites, python2.2 and apache2 distributions.

Communicating with Alan Roy on plans for new software platforms supported in VDT.

2 Status of Deliverables

New releases installed at FNAL, DPE release ready, including Clarens. DAR new features presented. LPC use-cases collected and discussed, status of Software support for LPC is presented. Users support is provided. First version of Projectswatch system including new functionality is ready (work with summer student).

3   Plans For Next Month

I am taking 10 days vacations in August. Before leaving I need to provide necessary DAR related stuff for MCPS, and try to build debug libraries for COBRA, wrap up the progress with the projects Watch, and leave final tasks for the summer student to work on (mostly documentation).

After return, install debug versions of CMS software for COBRA and ORCA, Next highest priority is to work on DAR-2 development in order to deliver new features needed for MCPS.

Ongoing public software installations, USCMS CVS repository administaration, CMS environment, users support, etc.

4   Longer Term Plans

Continue DAR-2 deveopment, and deployment.

5   Links To Supporting Documentation

- http://www.uscms.org/scpages/cmssoftware/

- http://home.fnal.gov/ natasha/SoftwareSupportLPC.ppt

- http://www.uscms.org/scpages/subsystems/gridinfo/DPE2_6_0.html

- http://agenda.cern.ch/fullAgenda.php?ida=a042971